

Title (en)

Filter apparatus with improved filtration and saturation level detection.

Title (de)

Filterapparat mit Erfassung des Filtrations- und Sättigungsniveaus.

Title (fr)

Appareil de filtrage avec détection du niveau de filtration et de saturation.

Publication

EP 0419747 A2 19910403 (EN)

Application

EP 89403284 A 19891128

Priority

US 41328089 A 19890927

Abstract (en)

An apparatus for removing contaminants generated in a volume of air contained within a work structure includes a housing (38), an inlet aperture (40) disposed in the housing for receiving the contaminated air generated in the structure, an outlet aperture (38) for passing of filtered air disposed in another portion of the housing removed from the inlet aperture (40) and a plurality of removable interchangeable filter units (48,50) disposed in the housing in spaced relationship between the inlet and outlet apertures (40,50) thereby forming a plurality of chambers each defined by adjacent filter units and the housing. A detector device (56) is engaged with at least the first chamber adjacent the inlet aperture (40) for detecting the level of concentration of contaminants in the air passing through the chamber. The apparatus also includes a fan device to direct the contaminated air from within the work structure through the inlet aperture (40) of the housing whereby the contaminated air passes through each filter unit and intermediate detection chambers for removal of at least a portion of the contaminants, and then to direct the filtered air (61) through the outlet aperture (58). In a preferred embodiment the fan device is positioned adjacent the inlet aperture for the purpose of increasing the pressure of air passing through the filter units to thereby optimize the filter capacity of the filter units.

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CPC (source: EP US)

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DE102009009143A1; EP0591673A1; DE4411078A1; FR2846892A1; DE102008062927A1; WO2004043572A1

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